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ABSTRACT

Over 100 different sets of computer assisted instruction (CAI) learning materials developed at the Florida State University CAI Center are briefly described in this document. Programs are listed by title; information about each title includes the amount of character storage required on the disks packs within the CAI system, audience level, student time required, and auxiliary materials available. Programs are indexed by subject matter and educational level. (JY)

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CAI CENTER

TECH MEMO

EXISTING CAI CURRICULUM MATERIALS AT THE FSU-CAI CENTER

Duncan N. Hansen, Betty J. Wright,
and Barbara F. Johnson

Tech Memo No. 13
June 30, 1970

Project NR 154-280
Sponsored by
Personnel & Training Research Programs
Psychological Sciences Division
Office of Naval Research
Washington, D.C.
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Over 100 different sets of CAI learning materials developed at the Florida State University CAI Center are briefly described in the following document. These CAI materials are listed and annotated in order that other investigators may save time and energy by utilizing the materials as a starting point for their own research and development efforts, if desired.

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ABSTRACT

Over 100 different sets of CAI learning materials developed at the Florida State University CAI Center are briefly described in the following document. These CAI materials are listed and annotated in order that other investigators may save time and energy by utilizing the materials as a starting point for their own research and development efforts, if desired.

EXISTING CAI CURRICULUM MATERIALS AT THE FSU-CAI CENTER

One is often asked about the time and energy required to develop computer-assisted instruction learning materials. We here at the Florida State University CAI Center have been actively utilizing an IBM 1500/DEC 680 system for approximately two and one-half years. During this time, numerous curriculum materials have been generated. They range across a broad spectrum of content topics representing all of the disciplines as well as spanning the grade levels from elementary school through graduate training. These materials have been primarily sponsored by the University Excellence Grant sponsored at the FSU CAI Center by the Office of Naval Research. In addition, the U.S. Office of Education and the National Science Foundation have contributed funds to this effort.

In the pages of this report, over 100 titles appear. Each title represents curriculum material developed here (or in process in May, 1970). Titles are explanatory of content, and one should analyze the key words to identify the content being covered. Immediately following the title, in the same column, is a segment number, referring to the amount of character storage required on the disk packs within the CAI system; one segment is approximately equal to half an hour of CAI instruction. (Approximately 1100 hours of instructional materials have been prepared during the last two and one-half years.)

In the second column on each page is an audience notation, which attempts to identify the educational level of the targeted student

population. The column "Auxiliary Materials" lists any printed, audio-taped, and slide materials required to provide the full learning experience.

As an aid in locating curriculum materials of particular interest to the reader, two classification systems have been added to the tables. The first lists each title by number as it appears in the main section of this report, and classifies it under one or more educational levels:

I Primary
II Intermediate
III Junior High
IV Senior High
V College (Fr-Soph) (1,2)
VI College (Jr-Sr) (3,4)
VII Graduate
VIII Adult Education - Remedial
IX Adult Education - Continuing

The second classification system lists each title number and classifies it according to subject matter. Thus a reader interested in high school level CAI exclusively can check columns III and IV of Index 1 for numbers of pertinent curriculum materials. Materials of certain subject matter interest are likewise easily identifiable in Index 2.

Anyone interested in acquiring any of the listed materials is invited to write: Dr. Duncan N. Hansen, Computer-Assisted Instruction Center, 1-A Tully Building, Florida State University, Tallahassee, Florida, 32306.

1500 PROGRAMS

Program Title	Student Time	Audience	Auxiliary Materials
1. Reading Comprehension for Elementary School Children (read)*	variable	1st-8th graders	none
2. Arithmetic Drill and Practice (arith) 0-35	variable	1st-8th graders	none
3. A Feasibility Study: Implementation and Optimization of a Computer Managed Instruction System in Graduate Education (scury, cogni, prod) 0-20	class time for one quarter	graduate students in Education	booklets, library references
4. The Effect of Response Mode on State Anxiety and Performance in Computer-Assisted Learning (ekg) 0-4	2 hours	introductory psychology students	none
5. Development of the Automated Slosson Individual Intelligence Test (sit) 0	1 hour	undergraduates	none
6. An Investigation into the Effectiveness and Optimal Temporal Position of Reviews for Rule Learning (rules) 0-3	3 hours	7th, 8th graders	none
7. Physics Lab Simulation (fysik) 0-28	variable	sophomore and junior high physics students	none

*This includes Read1 thru Read10 each of which is 80 segments - a segment being one lesson unit.

	Program Title	Student Time	Audience	Auxiliary Materials
8.	Learning Experimental Game Simulation (legs) 0-5	variable	high school-college	handout
9.	Subjective Organization in Free Recall as an Invididual Difference Measure (logos) 0	1-1/2 hours	introductory psychology students	none
10.	Minnesota Multiphasic Personality Inventory (fmmpi) 0	1-1/2 hours	college, adult populations	none
11.	Florida State University On-Line Co-ordinate Index Use Study (focus) 0	variable	library science graduate students	also required the APL system
12.	Seamen Military Requirements Curriculum (smrc) 0-4	20 hours	men ages 17-20	Seamen Recruit Course Manual, films, transparencies, handouts
13.	An Investigation into the Effects on Retention of Differential Feedback Delay Intervals (nsf) 0-5	5 hours	junior college students	none
14.	Sequential In-Basket Exercise (sibe) 0-1	variable	library science graduate students	handouts
15.	Individualized Instruction Efficient Use of Teaching Assistants in College Psychology Instruction (pest) 0-10	variable	psychology undergraduates	none
16	Simulation of Cultural Problem Effects on a Diplomatic Career (mispo) 0	45 minutes	7th, 8th graders	handout

	Program Title	Student Time	Audience	Auxiliary Materials
17.	ROTC Study Session on an Analysis of Battles Using the Nine Principles of War (ROTC) 0-1	variable	college ROTC students	handbook
18.	Finding Roots of Polynomial Equations and Related Concepts (alg) 0	variable	freshman, sophomore college math	none
19.	Development of a Methodology for Maximizing Achievement and Minimizing Time (max) 0	1-1/2 hours	college educational psychology and psychology	none
20.	Boolean Algebra (booln) 0-4	variable	naval training personnel	none
21.	Intermediate Science Curriculum Study (iscs7) 0-22	variable	7th grade science students	booklets, lab equipment
22.	Intermediate Science Curriculum Study (iscs8) 0-22	variable	8th grade science students	booklets, lab equipment
23.	Investigation of Response Latency Patterns of Addition, Subtraction, Multiplication, and Division of Facts (math, mathv, mft, dft, sft, aft) 0-1	variable	4th-9th graders	none
24.	Short Term Memory Studies (them) 0	1-1/2 hours	college freshmen and sophomores	none
25.	Experimental Test on Reliability and Validity Programs (reval) 0	2 hours	graduate students (EDR501, EDR502)	none
26.	Finding Roots of Polynomial Equations (algw2) 0	variable	high school seniors college freshmen	none

	Program Title	Student Time	Audience	Auxiliary Materials
27.	Intentional and Selective Forgetting (them2) 0	variable	college sophomores	none
28.	The Role of Incorrect Responses, Explanation and Student Pairing on the Learning of Programmed Text Material (psyed) 0	45 minutes	educational psychology students (jr.-sr.)	none
29.	The Mediated Transfer of Meaning (edr2) 0	1-2 hours	freshmen, sophomores psychology	none
30.	A Systems Approach to Educational Planning (halst) (hpert) 0-4	7 hours	educational adm. personnel from State Department of Education	filmstrips, tapes
31.	Coursewriter II, Planning, outlining, answer analysis, performance recording, branching (cwtwo) 0-1	2 hours	CAI trainees	CWII manual
32.	Physics Laboratory Experiments Using CAI (Pslab) 0-9	1 hour	nonphysics majors	none
33.	CAI Project in Introductory Physics (p107) 0-9	25 hours	nonphysics majors college freshmen	tapes, films
34.	Concepts of Social Welfare (socal) 0	4 hours	graduate students in Dept. of Soc. Welfare	none
35.	Use of CAI in Science Instruction (sense) 0	2 hours	8th graders	none
36.	Paired-Associate Learning (pal) 0-1	1-1/2 hours	psychology students	none

Program Title	Student Time	Audience	Auxiliary Materials
37. Methods of Presentation in General Curriculum Class on Selected Variables (curpa) 0-3	6 hours	juniors, seniors, graduate students	none
38. EDR510 Introductory Statistics Tests (stats) 0	50 minutes	graduate students beginning statistics	none
39. A Personality Aptitude Testing Program (oneil) 0	1 hour	introductory psychology students	none
40. Anxiety and Task Difficulty Using CAI (psy3) 0	1 hour	introductory psychology students	none
41. Intermediate Science Curriculum (iscs1) 0-22	120 hours	7th graders	booklet, lab equip. workbooks
42. Investigation in Complex Mental Processes (rotch) 0-4	3 hours	ROTC trainees	none
43. CAI in Dynamics: Rotation of a Rigid Body in Three Dimensions (egsdy) 0	1-1/2 hours	eng. science students	none
44. A Study of Information Processing Behavior Within an Electronic Training System (brown) (Brow2) 0-3	4 hours	introductory psychology students	none
45. Preventive Maintenance Systems (pms) 0	2 hours	naval reserve personnel	none
46. Learning Parameters: An Investigation of their Effective Utilization in Computer Based Adaptive Training (pic) (nrpic) (nr2) 0-1	5-8 hours	varied	none

Program Title	Student Time	Audience	Auxiliary Materials
47. The Conditioning of Verbal Statements with Political Content (polsc) O	30 minutes	college students	none
48. Metric System of Linear Measurement (carr) O	1 hour	graduate students	none
49. Comparison of Constructed Response and Multiple Choice Response Modes on Beginning Psychology Learning Materials (dunba) O	4 hours	beginning psychology students	none
50. A Programmed Introduction to Language Teaching (hande) O	1 hour	language education students	none
51. CAI Program on Introductory Programmed Instruction Terminology (galla) O	4 hours	beginning psychology students	none
52. Diagnostic Testing, Arithmetic (lipe) O	2 hours	4th-9th graders	none
53. Introduction to Set Theory (espig) O	2 hours	freshmen	none
54. Comparison of Constructed Response and Multiple Choice Response Modes on Beginning Psychology Learning Materials (river) O	1 hour	beginning psychology students	none
55. Interaction of Examiner Attitude with Praise and Blame (thesi) O	1 hour	college sophomores	none
56. Attitudes to Teaching Methods (essay) O	1 hour	college freshmen and sophomores	none

Program Title	Student Time	Audience	Auxiliary Materials
57. CAI Adaptation of Kuder Preference Record Test (kuder) 0	1 hour	all levels	none
58. Coursewriter II Program Flow (memor) 0	2 hours	adults interested in Coursewriter II	none
59. Trigonometry in General Education (white) 0	1 hour	mathematics instructors	none
60. Pedant--Programmed Exercise in Divergent and Normal Thinking (hogan) 0	30 minutes	junior high students	none
61. Number of Alternatives in A Multiple-Choice Programming Format (multi) 0-3	1-3/4 hours	freshmen, sophomores in psychology	none
62. A Computer-Assisted Program in Individualized Instruction in Elementary Reading (barb) 10	10 hours	2nd graders	none
63. Speech Preparation (blomq)	2 hours	freshmen	none
64. Social Welfare (hagerty)	1-1/2 hours	social welfare undergraduates	none
65. How to Improve Your Child's Performance (scan1)	2 hours	adults with minimum of 8th grade reading comprehension	none
66. Intermediate Science Curriculum Study (iscs9) 0-17	variable	9th graders	lab. equip., booklets
67. Social Sciences Retrieval System (it) 0-6	one quarter	social science majors	case studies, reference books

Program Title	Student Time	Audience	Auxiliary Materials
68. Behavioral Science Test (best, best2) 0-6	3 hours	social welfare undergrads, grads	none
69. Computer Managed Instruction (teach) 0-10	variable	elementary education juniors or above	none
70. Testing of Enablers in Elementary Model Field Study (quiz) 0	1 hour	elementary education majors	none

Program Title	Student Time	Audience	Auxiliary Materials
71. Elementary Physics (physics1) 5700	1-10 hours	college freshmen nonphysics maj.	booklet
72. CAI Applied to Basic Computer Programming of 1440 System in Fortran (fortran) 2767	4 hours	college sophomores interested in computer applications	booklet
73. Introduction to Computer Programming with Autocoder (ms200) 2807	4 hours	same as fortran	textbook
74. Concepts of Social Welfare Work (consowel) 2597	6 hours	graduate students in social welfare	none
75. Use of a Computer for Teaching Deductive Reasoning (deduct) 2000	30 minutes	high school	none
76. Boolean Algebra (booln) 7000	variable	naval training devices center personnel	booklet
77. Reading Comprehension (read) 5000	variable	1st-6th graders	none
78. Addition Drill (add) 5000	variable	1st-6th graders	none
79. Subtraction Drill (sub) 5000	variable	1st-6th graders	none
80. Individual and group differences in learning under two different modes of CAI (edtest) 2000	3 hours	seniors in the school of education	slides
81. Non-metric Geometry for grades 5-7 (geomb)	7-8 hours	5th, 6th, 7th graders	booklet

Program Title	Student Time	Audience	Auxiliary Materials
82. Auditory-Visual Stimulus Redundancy in Concept Identification (auviscon)	8 hours	college under-graduates	slides, tapes
83. Interaction of Intellectual Abilities and Form of Subject Matter Content (concept1) 2000	1 hour	graduate students in school of education	booklet or array board
84. Program for Non-Art Students Dealing with Prime Examples of Architectural Style (arthis) 1500	incomplete	elementary school teachers	none
85. Computational with Fractional Numbers (compfrac)	6 hrs. incomp. course	7th, 8th graders needing assistance with fractional numbers	slides
86. Concept Attainment thru Synonyms (cats)	7 hours	college under-graduates	none
87. Anxiety and Task Difficulty Using CAI Media (psy2) 0	1-1/2 hours	college students	none
88. Physics Demonstration Program (physdemo) 520	20-40 minutes	adult demo groups	none
89. Effects of Three Instructional Strategies on Achievement in a Remedial Arithmetic Program (addsub) 2500	3 hours	junior high low achievers in mathematics	none
90. Coursewriter I (fsucw) 2500	3 hours	authors and coders	booklet
91. General Chemistry Problem Solving (chem1) 2718	incomplete	college freshmen chemistry	none

Program Title	Student Time	Audience	Auxiliary Materials
92. An Investigation of Sequential Testing in College Physics (phytest) 2500	20-40 minutes	college freshmen and sophomores	none
93. Elementary Game Probability (gameprob) 812	1 hour	junior high school students	none
94. Demonstration Package (welcome) 1021	2 hours	visitors to CAI	none
95. An Investigation of the Application of Computer-Assisted Instruction and Information Retrieval Systems to Academic Advising in a Junior College (advise) 5000	2 hours	Tallahassee Junior College	none
96. A Comparison of Two Methods of Presenting an Axiom System (proof)	4 hours	college freshmen in math education classes	booklet
97. The Effects of Idiosyncratic Reinforcement Conditions on Learning Acquisition of a Complex Numbers Prog. (complex) (comnumst) (comnumii) 2737	4-5 hours	9th graders	posttest
98. The Use of Tests in Student Appraisal (testuse)	1-1/2 hours	graduate students in Principles of Guidance	none
99. The Development of Pre-Vocational Courses for the Instruction of Disadvantaged Youths and Adults in Arithmetic (arith1) 2737	5 hours	functional illiterates ages 16-22	none

	Program Title	Student Time	Audience	Auxiliary Materials
100.	An Experimental Study in Broadcast Communication with Speech Department (televis)	1-1½ hours	college seniors majors in broadcast	booklet
101.	Pre-Vocational Education Literacy Course for Disadvantaged Youths and Adults in Reading (read1)	50 hours	adult illiterates ages 21-45	slides, tapes
102.	Uses of the Comma (comma)	20 minutes	6th grade through high school	none
103.	Instructional Materials to be used in Educational Measurement Courses (teststat) (testref) 3734	6 hours	college seniors and graduate students in educational measurement	booklet
104.	Junior High Science Curriculum (jhcp)	120 hours*	7th grade students	lab equip; booklet, textbook

*This estimate is based on student having one 50-minute period five days a week for one school year.

INDEX I

PROGRAMS CLASSIFIED BY EDUCATIONAL LEVEL

I. PRIMARY

II. INTERMEDIATE

III. JUNIOR HIGH

IV. SENIOR HIGH

V. COLLEGE (JUNIOR) (1-2)

VI. COLLEGE (SENIOR) (3-4)

VII. GRADUATE

VIII. ADULT EDUCATION (REMEDIAL)

IX. ADULT EDUCATION (CONTINUING)

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
1	X	X	X					X	
2	X	X	X					X	
3							X		X
4					X	X			X
5					X				
6					X	X			X
7				X	X	X			X
8				X		X		X	X
9					X	X			
10					X	X	X	X	X
11							X		
12				X	X	X			
13					X	X			

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
14						X			
15					X	X			
16			X					X	
17					X	X			
18					X	X			X
19					X	X	X		X
20						X	X		X
21			X					X	
22			X					X	
23	X	X	X					X	
24					X			X	X
25							X		X
26				X	X				
27					X				X
28						X	X		
29					X				
30						X	X		X
31						X	X		X
32				X	X	X	X		X
33				X	X	X	X	X	X
34							X		X
35			X					X	

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
36					X	X			X
37					X	X	X		X
38							X		X
39					X	X			
40					X	X			
41			X					X	
42					X	X			
43					X	X			
44					X	X	X		X
45						X			X
46					X	X			X
47						X			
48							X		X
49						X			
50					X	X			
51						X			
52		X	X					X	
53								X	
54					X	X			
55					X				
56					X				
57			X	X	X	X	X	X	X

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
58							X		
59									X
60			X						
61					X				
62	X						X		
63					X				
64					X				
65								X	
66			X					X	
67						X	X		
68					X	X	X		X
69						X	X		X
70						X	X		X
71				X	X	X	X	X	X
72					X				X
73					X				X
74							X		X
75			X	X				X	
76				X		X			
77	X	X	X					X	
78	X	X	X					X	
79	X	X	X					X	X

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
80						X			X
81		X						X	
82					X				X
83						X	X		X
84						X	X		X
85			X					X	
86					X	X			X
87					X	X	X		X
88								X	X
89			X					X	
90					X	X			X
91				X	X				
92					X	X			
93			X					X	
94			X	X	X	X		X	X
95					X				
96					X				X
97			X					X	
98							X		X
99								X	
100						X			X
101								X	

Programs	Educational Level								
	I	II	III	IV	V	VI	VII	VIII	IX
102		X	X	X				X	
103						X	X		X
104			X					X	

INDEX II

PROGRAMS CLASSIFIED BY SUBJECT MATTER

1. Art Education
2. Computer Languages
3. Education
4. Engineering Science
5. Language Education
6. Library Science
7. Mathematics
8. Military
9. Physics
10. Political Science
11. Psychology
12. Reading
13. Science
14. Simulation and Games
15. Social Welfare
16. Speech
17. Statistics
18. Testing and Evaluation

Programs	Educational Content Area																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1												X						
2							X											
3			X															
4											X							
5											X							X
6							X											
7									X									
8														X				
9			X															X
10																		X
11						X												
12								X										
13							X											X
14						X								X				
15											X							
16														X				
17								X										
18							X											
19											X							
20							X											
21													X					
22													X					
23							X											X
24			X															X
25																		X
26							X											
27											X							
28											X							

Programs	Educational Content Area																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
29											X							
30			X															
31		X																
32										X								
33										X								
34															X			
35			X										X					
36			X								X							
37			X															
38																	X	
39											X							X
40											X							
41													X					
42								X										
43				X														
44											X							
45								X										
46							X											
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67															X			
68															X			
69																		X
70																		X
71									X									
72	X																	
73	X																	

Programs	Educational Content Area																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
74															X			
75		X																
76						X												
77												X						
78							X											
79							X											
80		X																X
81							X											
82			X															X
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103																		X
104														X				